

June 27, 2013



U.S. Department
of Transportation

East Building, PHH-30
1200 New Jersey Avenue S.E.
Washington, D.C. 20590

**Pipeline and Hazardous
Materials Safety Administration**

DOT-SP 11670
(ELEVEN REVISION)

EXPIRATION DATE: May 31, 2017

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Schlumberger-Oilfield UK Plc,
Dyce, Aberdeen, Scotland, United Kingdom
(U.S. Agent: Schlumberger, Houston, Texas)
2. PURPOSE AND LIMITATION:
 - a. This special permit authorizes the transportation in commerce of certain hazardous materials in a non-DOT specification cylinder used for oil well sampling. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein. The most recent revision supersedes all previous revisions.
 - b. The safety analyses performed in development of this special permit only considered the hazards and risks associated with transportation in commerce.
 - c. No party status will be granted to this special permit.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.302a in that a non-DOT specification cylinder is not authorized, except as prescribed herein.
5. BASIS: This special permit is based on the application of Schlumberger-Oilfield UK Plc., dated June 26, 2013 submitted in accordance with § 107.109.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

| Hazardous Material Description | | | |
|---|------------------------|-----------------------|---------------|
| Proper Shipping Name | Hazard Class/ Division | Identification Number | Packing Group |
| Hydrocarbon gas mixture, compressed, no's. | 2.1 | UN1964 | N/A |
| Hydrocarbon gas mixture, liquefied, n.o.s. | 2.1 | UN1965 | N/A |
| Hydrogen Sulfide | 2.3 | UN1053 | N/A |
| Liquefied Gas, Flammable, n.o.s. | 2.1 | UN3161 | N/A |
| Compressed gas, toxic, flammable, n.o.s. Inhalation Hazard Zone B | 2.3 | UN1953 | N/A |
| Petroleum Gases, Liquefied or Liquefied Petroleum Gas | 2.1 | UN1075 | N/A |

7. SAFETY CONTROL MEASURES:

- a. PACKAGING - Prescribed packaging is a non-DOT specification oil well sampling cylinder, threaded on one end, with a maximum design pressure of 25,000 psig. Each cylinder must comply with the design calculations, drawings, material specifications, and engineering specifications submitted with Oil phase's application for special permit on file with the Office of Hazardous Materials Special Permits and Approvals (OHMSPA). In addition, each cylinder must conform with DOT Specification 3A (§§ 178.35 and 178.36) except as follows:

§ 178.36(b) *Steel*.

Armco 17-4PH stainless steel double heat treated at 1150°F and conforming with Oil phase's Manufacturing Specifications MS 001 and MS 003 on file with OHMSPA or Inconel 718 (UNS N07718) or Inconel 725 (UNS N07725) conforming with Oil phase Manufacturing Specification MAT018. The material must meet the requirements of the

June 27, 2013

National Association of Corrosion Engineers (NACE)
Specification MR-0175 for suitability in hydrogen
sulfide (H₂S) service.

§ 178.36(g) *Heat treatment.*

No heat treatment required for the completed cylinder.

§ 178.36(f) *Wall thickness.*

The wall stress at the minimum specified test pressure may not exceed 60 percent of the minimum tensile strength as determined from the physical tests required in § 178.36(k) and (l).

§ 178.36(l) *Acceptable results for physical tests.*

17-4PH Stainless Steel

| | |
|---------------------------|------------------------------|
| Minimum Tensile strength: | 135,000 psi |
| Minimum Yield strength: | 105,000 psi |
| Elongation: | 16% on 1 inch gauge specimen |

Inconel 718

| | |
|---------------------------|------------------------------|
| Minimum Tensile strength: | 170,000 psi |
| Minimum Yield strength: | 125,000 psi |
| Elongation: | 20% on 1 inch gauge specimen |

Inconel 725

| | |
|---------------------------|------------------------------|
| Minimum Tensile strength: | 150,000 psi |
| Minimum Yield strength: | 120,000 psi |
| Elongation: | 20% on 1 inch gauge specimen |

§ 178.35(e) *Safety devices.*

No pressure relief device is required on the completed cylinder. Cylinder must be equipped with elastomeric seals that relieve pressure when subjected to a pool fire. The start to discharge pressure must not exceed the hydrostatic test pressure.

§ 178.35(f) *Marking.*

Applies except that cylinders must be marked "DOT-SP 11670" in lieu of DOT Specification marking.

- b. TESTING - Each cylinder must be reinspected and hydrostatically retested in accordance with 49 CFR §§ 180.205 and 180.209 as prescribed for DOT 3A Specification cylinders. Reheat treatment or repair of rejected cylinders is not permitted.
- c. OPERATIONAL CONTROLS -
 - (1) Each cylinder must be packed in the transportation box as specified in the application for special permit on file with the OHMSPA.
 - (2) Emergency response information provided with the shipment and available via an emergency response telephone number must indicate that the receptacles are not fitted with pressure relief devices and provide appropriate guidance in case receptacles are exposed to fire.
 - (3) The selection of cylinder materials, coatings, and maintenance of cylinders used in sour and/or corrosive gas service must be conducted in accordance with the material selection criteria detailed in the latest version of the NACE MR-0175/ISO 15156 standard and the recommendations provided in the Schlumberger "Tool Design Manual: Corrosion of Downhole Materials and Coatings" on file with the OHMSPA.

8. SPECIAL PROVISIONS:

- a. A person who is not a holder of this special permit who receives a package covered by this special permit may reoffer it for transportation provided no modification or change is made to the package and it is reoffered for transportation in conformance with this special permit and the HMR.
- b. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.

- c. The cylinders are authorized for oil well sampling service only.
- d. Transportation of Division 2.1 materials (flammable gases) or 2.3 materials (toxic gases) is not authorized aboard cargo vessel or aircraft unless specifically authorized in the Hazardous Materials Table (§ 172.101).
9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, cargo vessel, and cargo aircraft only.
10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each cargo vessel or aircraft used to transport packages covered by this special permit. The shipper must furnish a current copy of this special permit to the air carrier before or at the time the shipment is tendered.
11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:
- o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
 - o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
 - o Registration required by § 107.601 et seq., when applicable.

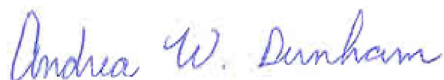
Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this special permit, including display of its number, when the special permit has expired or is otherwise no longer in effect.

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) - 'The Hazardous Materials Safety and Security Reauthorization Act of 2005' (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term "exemption" to "special permit" and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR 171.15 Immediate notice of certain hazardous materials incidents, and 171.16 Detailed hazardous materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for Dr. Magdy El-Sibaie
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Materials Safety Administration, Department of Transportation, Washington, D.C. 20590. Attention: PHH-31.

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: MooreBr/dl/SGrey